

In the Claims

We enclose new claims 1 – 15 for substitution for claims 1 – 13 on file:

1. (currently amended) A method of continuously producing a lead alloy strip having high initial tensile strength and elongation before yield greater than 40% for battery electrode plates comprising heating a lead alloy containing 0.05 – 0.09 wt% calcium, 0.6 – 1.8 wt% tin, 0.01 – 0.06 wt% silver and the balance lead to a temperature above the melting point of the lead alloy for feeding of the molten lead alloy to an extruder having a die block with a desired die profile, cooling the molten lead alloy below the melting point of the lead alloy, forcing the lead alloy through the die block at a pressure up to 2000 atmospheres to produce an extrusion with zero porosity having a desired strip profile and a homogeneous, equiaxed lead alloy grain structure, and rapidly cooling the extrusion while maintaining the extrusion under tension by quenching to acquire a strip having a homogeneous, equiaxed lead alloy grain structure with a predetermined grain size in the range of 10 to 300 microns.
2. (original) In a method as claimed in claim 1, extruding the lead alloy in the shape of a tube extrusion, slitting and opening the tube, and rolling the opened tube into a planar strip prior to rapidly cooling the extrusion.
3. (original) In a method as claimed in claim 1, extruding the lead alloy in the shape of a planar strip.
4. (original) In a method as claimed in claim 1, extruding the lead alloy to produce an extrusion having a desired profile.
5. (previously presented) A method as claimed in claim 1, in which the lead alloy is heated to a temperature in a temperature range from the melting point of the lead alloy up to 380°C for feeding of molten lead alloy to the extruder having a screwhousing, cooling the molten lead alloy within the screwhousing to a temperature below the melting point of the lead alloy for extrusion of the lead alloy through the die block, rapidly cooling the extruded strip under tension by quenching and winding the cooled extruded strip into a coil.

6. (previously presented) A method as claimed in claim 1 or 2, additionally comprising slitting and expanding the cooled planar strip into an expanded diamond grid mesh by rotary expansion wherein the ratio of the height of the diamond to the width of the diamond of the diamond grid mesh is up to almost 1.
7. (previously presented) A method as claimed in claim 1 or 2, additionally comprising forming the cooled planar strip into an expanded grid by reciprocating expansion, punching, machining, waterjet cutting, spark cutting or laser cutting.
8. (original) A method as claimed in claim 4, rapidly cooling the extrusion under tension and winding the cooled extrusion into a coil.
9. (original) A method as claimed in claim 4, additionally comprising slitting and expanding the cooled extrusion profile into an expanded grid by rotary expansion.
10. (original) A method as claimed in claim 4, additionally comprising forming the cooled extrusion profile into an expanded grid by reciprocating expansion, punching, machining, waterjet cutting, spark cutting or laser cutting.
11. (currently amended) An extruded lead alloy strip for battery electrodes produced by the method of any of claims 1 -5 and 8 - 10 [through 9] in which the lead alloy strip has zero porosity and high initial tensile strength and high elongation before yield greater than 40% with a homogeneous, equiaxed grain structure in the size range of 10 to 300 microns.
12. (previously presented) An expanded diamond-grid mesh produced by a method according to any of claims 8 or 9 for use as a battery electrode, said battery grid having a diamond shape with a height of the diamond to the width of the diamond of up to almost 1.
13. (previously presented) A lead acid battery having a plurality of battery electrodes produced by a method according to any of claims 8 or 9.

14. (currently amended) A method as claimed in claim 1 or 2, in which the lead alloy contains [0.05 to 0.07] 0.06 – 0.08 wt% calcium, [0.6 to 1.8] 1.4 – 1.6 wt% tin, 0.010 – 0.035 wt% silver and the balance lead.

15 (cancel) A method as claimed in claim 1 or 2, in which the lead alloy comprises 0.05 – 0.09 wt% calcium, 0.6 – 1.8 wt% tin, 0.01 – 0.06 wt% silver and the balance lead.